



*"Investing in Africa's Future"*

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES**

**DEPARTMENT OF HEALTH SCIENCES**

**SLS101: LABORATORY PRINCIPLES PRACTICAL**

**END OF FIRST SEMESTER EXAMINATIONS**

**NOV/DEC 2017**

**LECTURER: MR G. MALUNGA**

**DURATION: 3 HOURS**

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***INSTRUCTIONS***

1. Answer **all** questions in both sections A and B on separate answer sheets provided.
2. The mark allocation for each question is indicated at the end of the question.
3. Credit will be given for logical, systematic and neat presentations.

### **SECTION A : SPOT EXAM [ 40 MARKS ]**

For each of the questions 1 to 20 shown on power point, **(a)** Name the item shown and **(b)** State one use of the item in a clinical laboratory. You will be allocated 2 minutes per each slide.

### **SECTION B [60 MARKS]**

#### **Question 1**

You are provided with Sodium Chloride granules, 3.5% Sodium Hypochlorite solution and absolute ethanol. Use these provided chemicals to prepare the following solutions. Fully describe the method of preparation of each solution showing all the calculations, masses and volumes used. Label your solutions clearly showing your candidate number and the name of the solution. Submit the prepared solutions for marking.

- (a)** 80ml of physiologic saline.[10]
- (b)** 50ml of 10 000ppm Sodium hypochlorite solution using 3.5% Sodium hypochlorite solution.[10]
- (c)** 70ml of 70% ethanol.[10]
- (d)** State one laboratory use of each of the solutions which you have prepared. [ 3 ]
- (e)** Name two other disinfectants which are commonly used in a clinical laboratory. [ 2 ]

TOTAL: 35 MARKS

## Question 2

You are provided with a urine sample labeled **U**. Mix the urine thoroughly and pour it in a centrifuge tube and centrifuge it at 3000 rpm for 5 minutes. Pour away the supernatant and keep the sediment. Tap off the sediment and place a sufficient amount of the sediment on a glass slide and cover with a cover slip. Observe the sediment under a microscope using a 40X objective lens.

- (a) Obtain a clear focus of one field using the 40X objective lens and make a good drawing of what you are observing. [20]
- (b) Describe how a microscope can be maintained in good condition. [5]

TOTAL: 25 MARKS